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0718 #6

OIKE

ENTERED

RAW SEQUENCE LISTING

DATE: 07/24/2002

PATENT APPLICATION: US/09/963,761B

TIME: 14:30:49

Input Set : A:\pto.vsk.txt

Output Set: N:\CRF3\07242002\I963761B.raw

```

3 <110> APPLICANT: Arazi, Tzahi
4      Gal-On, Amit
5      Shibolet, Yoel Moshe
7 <120> TITLE OF INVENTION: VECTORS FOR EXPRESSING HETEROLOGOUS PEPTIDES AT THE AMINO-
TERMINUS OF
8      POTYVIRUS COAT PROTEIN, METHODS FOR USE THEREOF, PLANTS INFECTED WITH SAME AND
9      METHODS OF VACCINATION USING SAME
11 <130> FILE REFERENCE: 1686/4
13 <140> CURRENT APPLICATION NUMBER: 09/963,761B
14 <141> CURRENT FILING DATE: 2001-09-27
16 <150> PRIOR APPLICATION NUMBER: US 60/253,136
17 <151> PRIOR FILING DATE: 2000-11-28
19 <160> NUMBER OF SEQ ID NOS: 33
21 <170> SOFTWARE: PatentIn version 3.1
23 <210> SEQ ID NO: 1
24 <211> LENGTH: 837
25 <212> TYPE: DNA
26 <213> ORGANISM: Zucchini yellow mosaic virus
28 <400> SEQUENCE: 1
29 tcaggcactc agccaactgt ggcagatgct ggagctacaa agaaagataa agaagatgac      60
31 aaagggaaaa acaaggacgt tacaggctcc ggctcagggtg agaaaacagt agcagctgtc      120
33 acgaaggaca aggatgtgaa tgctggttct catgggaaaa ttgtgccgcg tctttcgaag      180
35 atcacaaaga aaatgtcatt gccacgcgtg aaaggaaatg tgatactcga tattgatcat      240
37 ttgctggaat ataaaccgga tcaaattgag ttatataaca cacgagcgtc tcatcagcag      300
39 ttgcctctt ggttcaacca ggtaagacg gaatatgatt tgaacgagca acagatggga      360
41 gttgtaatga atggtttcat ggtttggtgc attgagaatg gcacttcacc cgacattaat      420
43 ggagtgtggg ttatgatgga cggaaatgag caagttgagt atcccttgaa accaatagtt      480
45 gaaaatgcaa agccaacgct gcggcaaata atgcatcatt ttccagatgc agcggaggca      540
47 tatatagaga tgagaaatgc agaggcaacca tacatgcoga ggtatggttt gcttcgaaac      600
49 ctacgggata ggagtttagc acgatatgct ttgtatttct atgaagtcaa ttctaaaact      660
51 cctgaaagag cccgcgaagc tgttgcgcag atgaaagcag cagctcttag caatgtttct      720
53 tcaaggttgt ttggccttga tggaaatgtt gccaccacta gcgaagacac tgaacggcac      780
55 actgcacgtg atgttaatat aaacatgcac accttactag gtgtgaatac aatgcag      837
58 <210> SEQ ID NO: 2
59 <211> LENGTH: 279
60 <212> TYPE: PRT
61 <213> ORGANISM: Zucchini yellow mosaic virus
63 <400> SEQUENCE: 2
65 Ser Gly Thr Gln Pro Thr Val Ala Asp Ala Gly Ala Thr Lys Lys Asp
66 1          5          10          15
69 Lys Glu Asp Asp Lys Gly Lys Asn Lys Asp Val Thr Gly Ser Gly Ser
70          20          25          30
73 Gly Glu Lys Thr Val Ala Ala Val Thr Lys Asp Lys Asp Val Asn Ala
74          35          40          45

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77 Gly Ser His Gly Lys Ile Val Pro Arg Leu Ser Lys Ile Thr Lys Lys
78      50                      55                      60
81 Met Ser Leu Pro Arg Val Lys Gly Asn Val Ile Leu Asp Ile Asp His
82 65                      70                      75                      80
85 Leu Leu Glu Tyr Lys Pro Asp Gln Ile Glu Leu Tyr Asn Thr Arg Ala
86                      85                      90                      95
89 Ser His Gln Gln Phe Ala Ser Trp Phe Asn Gln Val Lys Thr Glu Tyr
90                      100                      105                      110
93 Asp Leu Asn Glu Gln Gln Met Gly Val Val Met Asn Gly Phe Met Val
94                      115                      120                      125
97 Trp Cys Ile Glu Asn Gly Thr Ser Pro Asp Ile Asn Gly Val Trp Val
98      130                      135                      140
101 Met Met Asp Gly Asn Glu Gln Val Glu Tyr Pro Leu Lys Pro Ile Val
102 145                      150                      155                      160
105 Glu Asn Ala Lys Pro Thr Leu Arg Gln Ile Met His His Phe Ser Asp
106                      165                      170                      175
109 Ala Ala Glu Ala Tyr Ile Glu Met Arg Asn Ala Glu Ala Pro Tyr Met
110                      180                      185                      190
113 Pro Arg Tyr Gly Leu Leu Arg Asn Leu Arg Asp Arg Ser Leu Ala Arg
114                      195                      200                      205
117 Tyr Ala Phe Asp Phe Tyr Glu Val Asn Ser Lys Thr Pro Glu Arg Ala
118      210                      215                      220
121 Arg Glu Ala Val Ala Gln Met Lys Ala Ala Ala Leu Ser Asn Val Ser
122 225                      230                      235                      240
125 Ser Arg Leu Phe Gly Leu Asp Gly Asn Val Ala Thr Thr Ser Glu Asp
126                      245                      250                      255
129 Thr Glu Arg His Thr Ala Arg Asp Val Asn Arg Asn Met His Thr Leu
130                      260                      265                      270
133 Leu Gly Val Asn Thr Met Gln
134      275

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137 <210> SEQ ID NO: 3

138 <211> LENGTH: 20

139 <212> TYPE: DNA

140 <213> ORGANISM: Zucchini yellow mosaic virus

142 <400> SEQUENCE: 3

143 catttccttt cacgcgtggc

20

146 <210> SEQ ID NO: 4

147 <211> LENGTH: 21

148 <212> TYPE: DNA

C--> 149 <213> ORGANISM: Artificial

151 <220> FEATURE:

152 <223> OTHER INFORMATION: Nucleotide sequence encoding Hexa-Histidine with a Serine at
its

153 N'

155 <400> SEQUENCE: 4

156 tcacaccatc accatcacca t

21

159 <210> SEQ ID NO: 5

160 <211> LENGTH: 7

161 <212> TYPE: PRT

C--> 162 <213> ORGANISM: Artificial

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164 <220> FEATURE:
165 <223> OTHER INFORMATION: Hexa-Histidine (His) peptide fuse to serine (Ser) at its N'
167 <400> SEQUENCE: 5
169 Ser His His His His His His
170 1 5
173 <210> SEQ ID NO: 6
174 <211> LENGTH: 53
175 <212> TYPE: DNA
C--> 176 <213> ORGANISM: Artificial
178 <220> FEATURE:
179 <223> OTHER INFORMATION: Nucleotide sequence encoding Hexa-histidine fused to the N-
termin
180 us of Zucchini Yellow Mosaic Virus coat protein gene
182 <400> SEQUENCE: 6
183 cagctgcagt cacaccatca ccatcaccat tcaggcactc agccaactgt ggc 53
186 <210> SEQ ID NO: 7
187 <211> LENGTH: 55
188 <212> TYPE: DNA
C--> 189 <213> ORGANISM: Artificial
191 <220> FEATURE:
192 <223> OTHER INFORMATION: Nucleotide sequence encoding Hexa-histidine fused to the N-
termin
193 us of Zucchini Yellow Mosaic Virus coat protein gene of which the
194 N' terminal 8 amino acids were deleted
196 <400> SEQUENCE: 7
197 cagctgcagt cacaccatca ccatcaccat gatactggag ctacaaagaa agaag 55
200 <210> SEQ ID NO: 8
201 <211> LENGTH: 45
202 <212> TYPE: DNA
203 <213> ORGANISM: Homo sapiens
205 <400> SEQUENCE: 8
206 tcagcatcag agcagaagct catttcagag gaggatctcg gatcc 45
209 <210> SEQ ID NO: 9
210 <211> LENGTH: 15
211 <212> TYPE: PRT
212 <213> ORGANISM: Homo sapiens
214 <400> SEQUENCE: 9
216 Ser Ala Ser Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu Gly Ser
217 1 5 10 15
220 <210> SEQ ID NO: 10
221 <211> LENGTH: 77
222 <212> TYPE: DNA
C--> 223 <213> ORGANISM: Artificial
225 <220> FEATURE:
226 <223> OTHER INFORMATION: Nucleotide sequence encoding the peptide derived from Human
c-Myc
227 -tag fused to the N-terminus of Zucchini Yellow Mosaic Virus (AGI
228 I) coat protein gene
230 <400> SEQUENCE: 10
231 cagctgcagt cagcatcaga gcagaagctc atttcagagg aggatctcgg atcctcaggc 60
233 actcagccaa ctgtggc 77
236 <210> SEQ ID NO: 11

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237 <211> LENGTH: 82
238 <212> TYPE: DNA
C--> 239 <213> ORGANISM: Artificial
241 <220> FEATURE:
242 <223> OTHER INFORMATION: Nucleotide sequence encoding the peptide derived from a
partial H
243      uman c-Myc-tag fused to the N-terminus of Zucchini Yellow Mosaic
244      Virus (AGII) coat protein gene of which the N' terminal 8 amino a
245      cids were deleted
247 <400> SEQUENCE: 11
248 cagctgcagt cagcatcaga gcagaagctc atttcagagg aggatctcgg atccgatact      60
250 ggagctacaa agaaagataa ag      82
253 <210> SEQ ID NO: 12
254 <211> LENGTH: 81
255 <212> TYPE: DNA
C--> 256 <213> ORGANISM: Artificial
258 <220> FEATURE:
259 <223> OTHER INFORMATION: Nucleotide sequence encoding the peptide derived from a
partial H
260      uman c-Myc-tag fused to the N-terminus of Zucchini Yellow Mosaic
261      Virus (AGII) coat protein gene of which the N' terminal 13 amino
262      acids were deleted
264 <400> SEQUENCE: 12
265 cagctgcagt cagcatcaga gcagaagctc atttcagagg aggatctcgg atccaagaaa      60
267 gataaagaag atgacaaagg g      81
270 <210> SEQ ID NO: 13
271 <211> LENGTH: 31
272 <212> TYPE: DNA
C--> 273 <213> ORGANISM: Artificial
275 <220> FEATURE:
276 <223> OTHER INFORMATION: Nucleotide sequence encoding the peptide derived from a
partial H
277      uman c-Myc-tag fused to the N-terminus of Zucchini Yellow Mosaic
278      Virus (AGII) coat protein gene of which the N' terminal 18 amino
279      acids were deleted
281 <400> SEQUENCE: 13
282 cgcggatccg atgacaaagg gaaaaacaag g      31
285 <210> SEQ ID NO: 14
286 <211> LENGTH: 30
287 <212> TYPE: DNA
C--> 288 <213> ORGANISM: Artificial
290 <220> FEATURE:
291 <223> OTHER INFORMATION: Nucleotide sequence encoding the peptide derived from a
partial H
292      uman c-Myc-tag fused to the N-terminus of Zucchini Yellow Mosaic
293      Virus (AGII) coat protein gene of which the N' terminal 23 amino
294      acids were deleted
296 <400> SEQUENCE: 14
297 ctcggatcca acaaggatgt tacaggctcc      30
300 <210> SEQ ID NO: 15
301 <211> LENGTH: 27
302 <212> TYPE: DNA
C--> 303 <213> ORGANISM: Artificial

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Input Set : A:\pto.vsk.txt

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```

305 <220> FEATURE:
306 <223> OTHER INFORMATION: Nucleotide sequence encoding the peptide derived from a
partial H
307      uman c-Myc-tag fused to the N-terminus of Zucchini Yellow Mosaic
308      Virus (AGII) coat protein gene of which the N' terminal 28 amino
309      acids were deleted
311 <400> SEQUENCE: 15
312 cgcggatccg gctccggctc aagtgag                                27
315 <210> SEQ ID NO: 16
316 <211> LENGTH: 30
317 <212> TYPE: DNA
C--> 318 <213> ORGANISM: Artificial
320 <220> FEATURE:
321 <223> OTHER INFORMATION: Nucleotide sequence encoding the peptide derived from a
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322      uman c-Myc-tag fused to the N-terminus of Zucchini Yellow Mosaic
323      Virus (AGII) coat protein gene of which the N' terminal 33 amino
324      acids were deleted
326 <400> SEQUENCE: 16
327 cgcggatccg agaaaacagt ggcagctgctc                            30
330 <210> SEQ ID NO: 17
331 <211> LENGTH: 28
332 <212> TYPE: DNA
C--> 333 <213> ORGANISM: Artificial
335 <220> FEATURE:
336 <223> OTHER INFORMATION: Nucleotide sequence encoding the peptide derived from a
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337      uman c-Myc-tag fused to the N-terminus of Zucchini Yellow Mosaic
338      Virus (AGII) coat protein gene of which the N' terminal 38 amino
339      acids were deleted
341 <400> SEQUENCE: 17
342 cgcggatccg ctgtcacgaa ggacaagg                                28
345 <210> SEQ ID NO: 18
346 <211> LENGTH: 33
347 <212> TYPE: DNA
C--> 348 <213> ORGANISM: Artificial
350 <220> FEATURE:
351 <223> OTHER INFORMATION: Nucleotide sequence encoding the peptide derived from a
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352      uman c-Myc-tag fused to the N-terminus of Zucchini Yellow Mosaic
353      Virus (AGII) coat protein gene of which the N' terminal 43 amino
354      acids were deleted
356 <400> SEQUENCE: 18
357 cgcggatcca aggatgtaaa tgctggttct cat                            33
360 <210> SEQ ID NO: 19
361 <211> LENGTH: 30
362 <212> TYPE: DNA
C--> 363 <213> ORGANISM: Artificial
365 <220> FEATURE:
366 <223> OTHER INFORMATION: Nucleotide sequence encoding the peptide derived from a
partial H
367      uman c-Myc-tag fused to the N-terminus of Zucchini Yellow Mosaic
368      Virus (AGII) coat protein gene of which the N' terminal 48 amino

```

369

acids were deleted

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/963,761B

DATE: 07/24/2002

TIME: 14:30:50

Input Set : A:\pto.vsk.txt

Output Set: N:\CRF3\07242002\I963761B.raw

L:149 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:4
L:162 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:5
L:176 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:6
L:189 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:7
L:223 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:10
L:239 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:11
L:256 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:12
L:273 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:13
L:288 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:14
L:303 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:15
L:318 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:16
L:333 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:17
L:348 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:18
L:363 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:19
L:402 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:22
L:419 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:23
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L:467 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:26
L:482 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:27
L:517 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:30
L:531 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:31